Rock shelter stratigraphy

EXCAVATIONS AT ERIDGE

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Excavation of two rock shelters at Eridge during 1999 yielded close to 500 struck flints of Mesolithic date and evidence of possible Late Iron Age/Early Romano-British iron-smelting. Although disturbed by animal activity, the relationship of the finds to each other and to the sediments in which they were found indicated the existence of former land surfaces and activity areas. Buried positive features, including two hearths and a pour of tap-slag, were also identified.

INTRODUCTION

DESCRIPTION

Eridge Rocks Nature Reserve (NGR TQ 554 358), located towards the centre of the High Weald and managed by the Sussex Wildlife Trust, contains one of a series of rock outcrops formed in the Ardingly Sandstone. These include, for example, Harrison's Rocks, High Rocks, Rocks Wood and Bowles Rocks (Fig. 1b), all of which have produced evidence of Mesolithic activity. The 800 m long escarpment comprises a generally east-facing cliff, between five and ten metres high, while the ground below slopes towards a stream (Fig. 1c). Owing to the weathering of the cliff, and the constant deposition of material below, the area provides considerable potential for good archaeological preservation.

RESEARCH INTERESTS

Until 1997 the site was in private hands and largely inaccessible to the public, but clearance by the Sussex Wildlife Trust in preparation for the managed opening of the reserve to climbers presented an opportunity to seek answers to a series of questions relating to its prehistoric occupation. A primary objective was the identification of *in situ* Mesolithic deposits and the recovery of flint assemblages representative of distinct typological and/or activity horizons. Also important was a consideration of any such deposits in relation to sediment deposition, erosion and subsequent soil development, and the implications of these processes for our understanding of artefact assemblages recovered from Eridge and other similar catchments.

ROCK SHELTER STRATIGRAPHY

The deposits excavated consisted of quartz sand and a few water-rolled quartzite pebbles and larger rock fragments derived from the weathering of the adjacent rocks. The potential for burial and therefore of closed archaeological assemblages within them is high, but owing to the slow speed of deposition and the high probability of surface mixing, the survival both of visible land surfaces and *in situ* assemblages is unlikely. The identification of specific episodes of archaeological — or other — activity within such deposits depends on the following three things. Firstly, they must be sedimentologically distinct, or have sufficient time depth between them in terms of sediment deposition for them to be distinguishable from other similar episodes. Secondly, they must be undisturbed by burrowing animals; and/or thirdly, they must be chronologically or functionally distinct.

At Eridge these criteria were not wholly fulfilled. In the first area chosen for examination (test pits A and B; Fig. 1c), the existence of a developed podzol indicated that it had remained largely undisturbed in recent times, although there was evidence of animal burrowing in the upper levels, particularly on the side closest to the rocks; but in the second area (test pits D and E/extension; Fig. 1c), there was no developed soil, and evidence of animal activity occurred throughout. Only deposits incorporating distinct, usually large-sized, clastic material were distinguishable, and it appears likely that finds relating to different episodes of activity were mixed both during and prior to the excavation. However, sufficient material in both areas remained

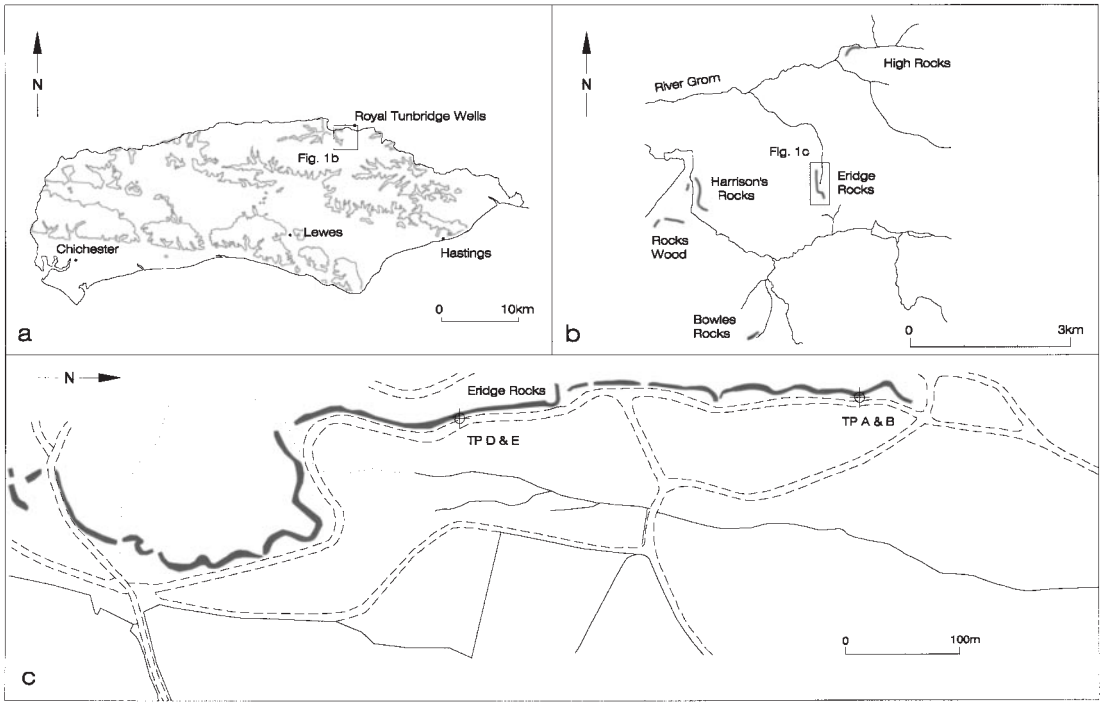

Fig. 1. Site and trench location.

undisturbed, or had been subject to vertical displacement only, for its horizontal distribution to remain interpretatively viable. Clearly this has implications for the way in which rock shelters are excavated.

EXCAVATION

Two sites were selected for investigation in areas immediately in front of, and partially protected by, prominent 'rock shelters', characterized by significant rock overhangs (Fig. 1c). Four test pits, two at 1.5 m^2 (A and B) and two at 1 m^2 (D and E), one of which was later extended (E), were excavated with mattock and trowel. Owing to the lack of clear stratification, they were excavated in spits. All soil removed was passed through a 4 mm sieve in order to recover small flints.

TEST PITS A AND B

Both test pits (Fig. 2) were excavated to the maximum legal depth of *c.* 1.5 m, the upper 400 mm being excavated by trowel alone. Although there were no obvious sedimentological breaks within the excavated profile, and no archaeological features were identified, possible former land surfaces were suggested by the occurrence of flint flakes lying horizontally within the higher, trowelled, deposits. Struck flint was present throughout and displayed no significant vertical concentrations, indicating either repeated episodes of activity or sediment mixing. At most depths, however, many more artefacts were recovered from test pit B than test pit A, and a much higher percentage of these had been burnt (Fig. 3). This indicates a focus of activity nearby involving fire and the use or manufacture of struck flint. Although much of the flint cannot be closely dated, the identification within the assemblage of artefacts of Mesolithic type (Fig. 7) and the absence from it of types characteristic of other periods indicates a Mesolithic date for this activity.

TEST PITS D AND E EXTENSION

Test pit D, excavated to a depth of *c.* 600 mm, contained a number of struck flints and a single pottery sherd of the same fabric as the bulk of that recovered from the area of test pit E and therefore probably of Late Iron Age/Early Romano-British date

(Table 1), but no archaeological features were identified.

Several features and activity 'horizons' were distinguishable within the area of test pit E, although for the most part clear stratigraphy could not be discerned, i.e. it was difficult to establish chronological relationships between the different contexts. The uppermost feature was a single pour of primitive, i.e. non-Fayalitic, tap-slag (Context 5; Fig. 4a) — almost certainly from iron-working. It weighed *c*. 9 kg and comprised a concentration of separate, but interlocking, slag nodules with the puckered surface morphology typical of pouring (*vide* Bachmann 1982, 4). It lay about 110 mm below the modern land surface. A possible furnace location slightly up-slope of the slag is indicated by fire-spalling on the rock immediately to the west. The slag, which lay on a horizontal plane, formed part of a discontinuous but distinct horizon, defined by the presence of numerous raw clay nodules (Context 10; Fig. 5). This context is indicative of a former land surface. It incorporated a broken whetstone of coarse, ferruginous sandstone likely to have been imported from the Low Weald, a few fragments of furnace lining, and sherds from two pottery vessels, one of Late Iron Age/Early Romano-British date and one of probable pre-Roman date (Table 1; Fig. 6), similar to material found elsewhere in the wealden district (Hamilton 1992, 50; Pollard & Streeten 1987, 21). Weathered surfaces on some of these sherds, restricted to one side only, suggest that they lay

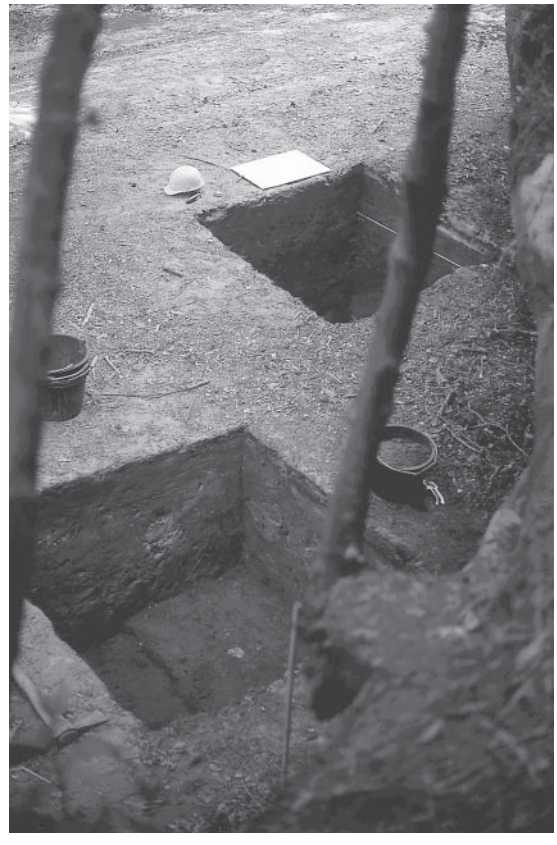

Fig. 2. Test pits A and B from the north-west.

Table 1. Finds of pottery. Sherd numbers correspond to those located in Figure 4a and illustrated in Figure 5.

Context	Small finds no.	weight (g)	Fabric	Burnished	Decoration/ vessel form	Inclination (approx.)	Date
Test pit D							
2	none*	3	E	?	none†	?	?LIA/Early Roman
Test pit E/extension							
10	1	17	F	no	non-expanded base	90°	1st millennium BC
10	3	10	E	yes	rounded shoulder with two horizontal incisions, *c*. 2 mm wide	80°	LIA/Early Roman
10	5	1	E	yes	incision *c*. 2 mm wide	horizontal	LIA/Early Roman
10	6	6	E	yes	expanded base†	90°	LIA/Early Roman
10	7	10	E	no	base	90°	LIA/Early Roman
4	8	1	E	yes	none	?	LIA/Early Roman
10	9	13	E	yes	expanded base	horizontal - 45°	LIA/Early Roman
4	none*	1	S	no	none	?	?
unstrat.	none*	1	E	yes	none	?	LIA/Early Roman

Key: F = un-oxidized, sparse to moderate (5–10%) medium to coarse sand-sized (0.5–3.5 mm) calcined flint temper; E (East Sussex Ware) = un-oxidized (except where burned after breakage), ?common sand-sized grog temper with sparse to moderate (5–10%) medium to coarse sand-sized (0.5–2.5 mm) silty nodules of a buff colour; S = un-oxidized interior surface and core, oxidized exterior surface, common (>25%), rounded medium quartz sand temper; † = burnt after breakage; * = single sherd not located horizontally.

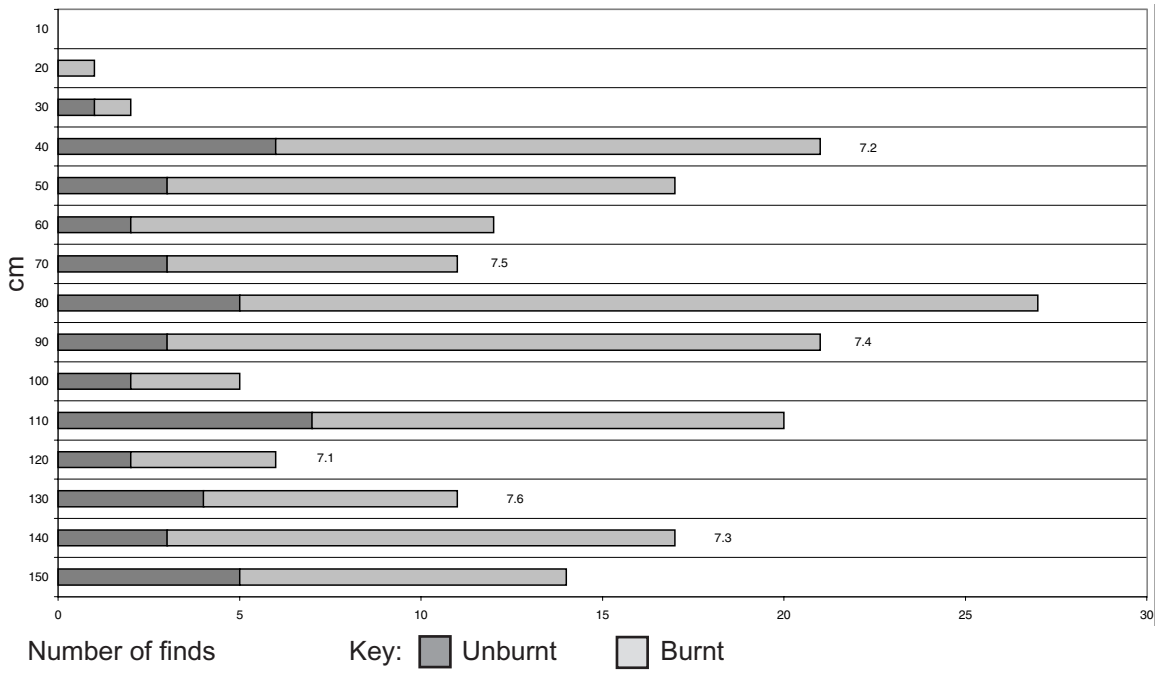

Fig. 3. Test pit B. Vertical distribution of flint at 10 cm intervals below the modern surface (by C. Derham), showing the locations of the illustrated microliths (Fig. 7:1–6).

exposed on the land surface for some time prior to burial. It is uncertain whether these sherds were in a primary position or they had fallen from the cliff top above.

Two hearths (Contexts 11 & 12) of probable prehistoric date, comprising burnt Ardingly sandstone, were also identified (Fig. 4b). These were at 300 mm (Context 11) and 400 mm (Context 12) below the modern land surface. The stratigraphic relationships of hearth 12 were uncertain. Both physically and stratigraphically, hearth 11 lay below the clay nodules of Context 10 (Fig. 5). As with Context 10, these two features signify the existence of a discrete buried land surface or surfaces. Finds of struck flint, which included burnt material and some artefacts of probable Mesolithic type (Table 2), were concentrated to the north-east of the trench in the area of hearth 11. Some of this material was at the same physical level as the hearth; most, however, was recovered from higher, and probably mixed, levels (Contexts 4 & 6) which cannot be related to it either in terms of function or date. Few finds were made in the area of hearth 12. Below the rock face, at *c.* 250 mm beneath the modern land surface, was a line of angular rock fragments resulting from past freeze–thaw processes.

THE MESOLITHIC TOOL-KIT

With the exception of the whetstone from Context 10, all of the stone tools found at Eridge are of flint. Two varieties are represented: light brown and cloudy grey to dark grey. Surviving patches of thick cortex, found on some examples, indicate that they derive from deposits on or close to the chalk. There is no evidence for the quarrying of flint or for the use of material from a beach or riverine source.

The majority of the flints recovered — both tools and debitage — belong to a blade industry usually identified with the Mesolithic or Early Neolithic period, but a few broad-butted flakes, including several from the immediate vicinity of Context 11, would not be out of place within a later assemblage (Table 2). The presence of microliths and the absence of exclusively later types, however, suggests a Mesolithic date. The microliths are all from test pit B. They include two obliquely blunted points (Figs 7.3 & 7.4), a type associated with early Mesolithic

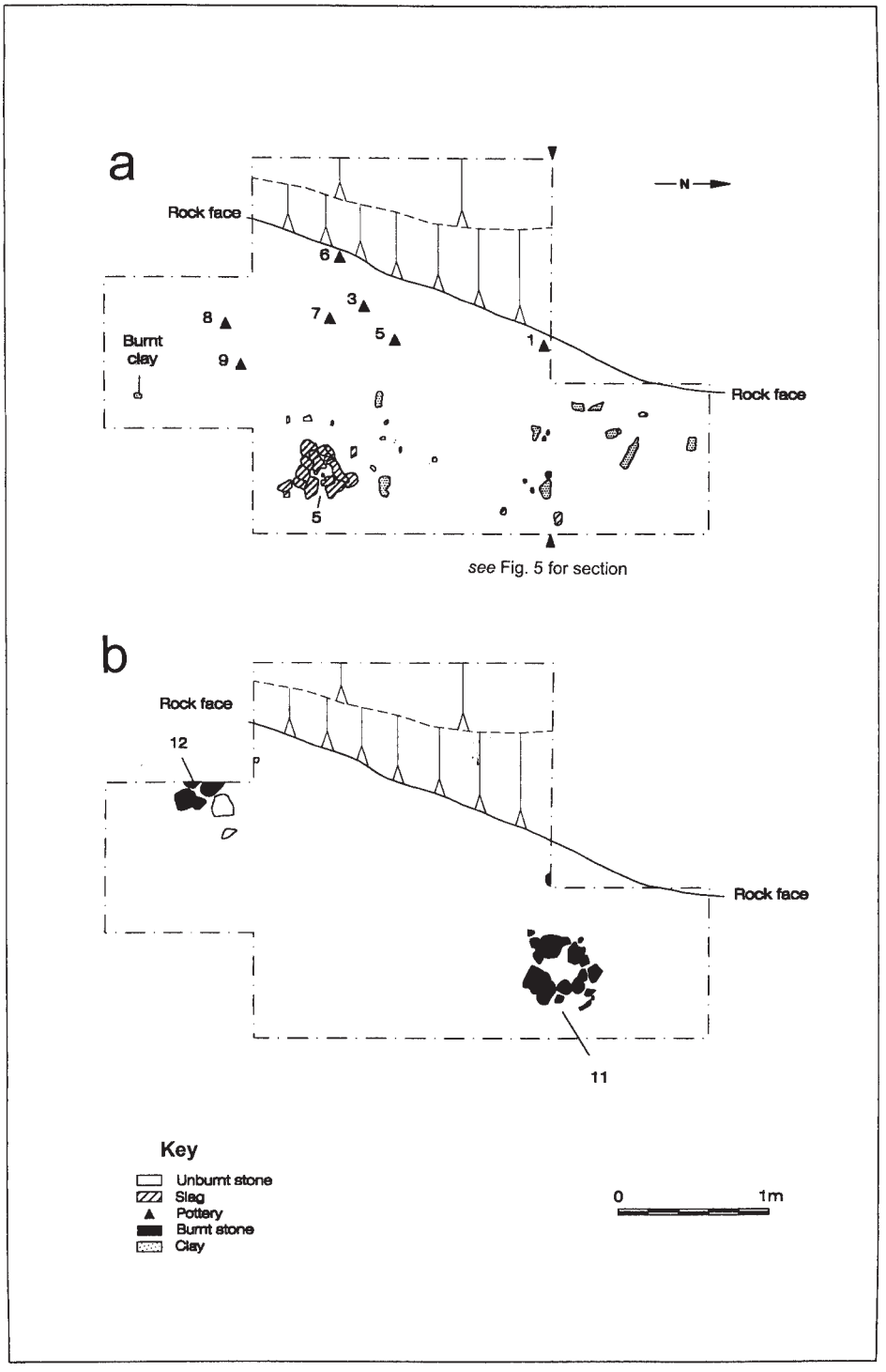

Fig. 4. Test pit E/extension: a) Plans and surface of LIA/early Roman date. Sherd numbers correspond to those described in Table 1 and illustrated in Figure 6; b) Land surfaces of probably Mesolithic date.

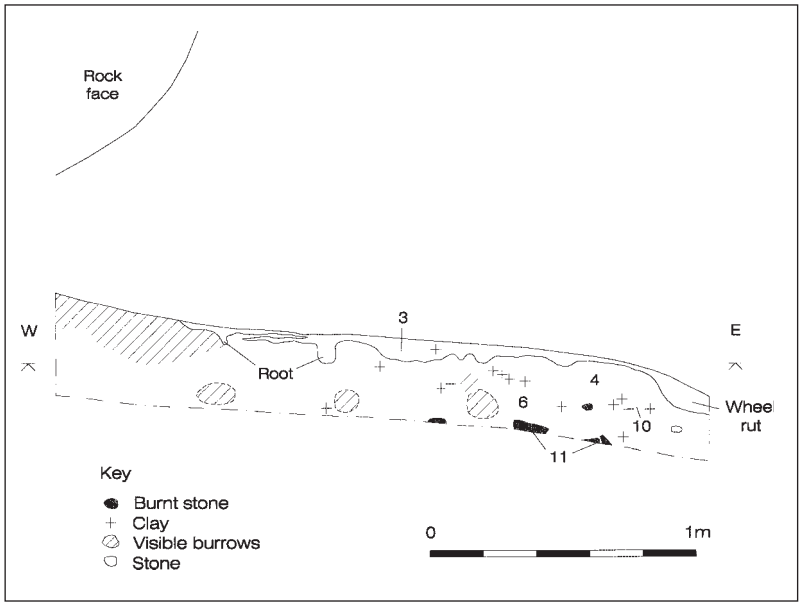

Fig. 5. Test pit E/extension. Section.

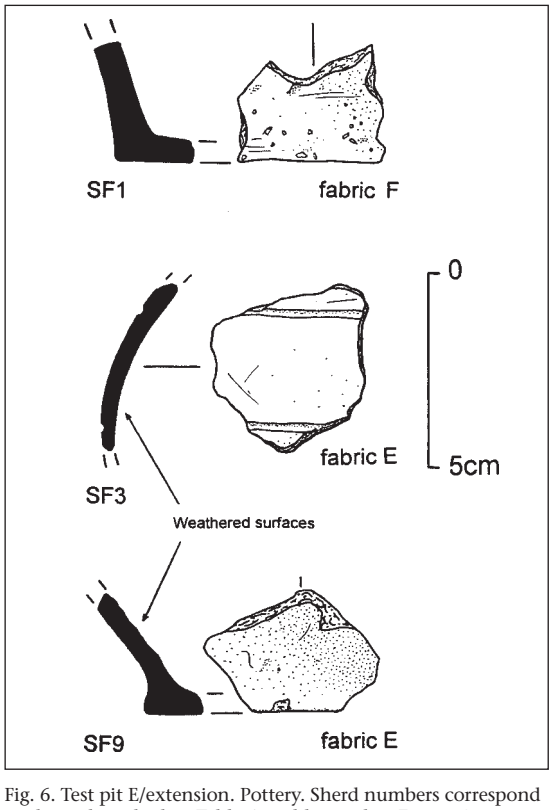

Fig. 6. Test pit E/extension. Pottery. Sherd numbers correspond to those described in Table 1 and located in Figure 4a.

assemblages, an unfinished, straight, backed-bladelet (Fig. 7.5) and a rectangular piece (Fig. 7.6), both of which would usually be considered later (Jacobi 1978, 16, 19), and two pieces which cannot be categorized (Figs 7.1 & 7.2). A large number of narrow-butted blades and bladelets (one of which has been retouched at one end to form a piercer/awl), rather fewer utilized flakes, two or possibly three notched pieces, two burins and a large quantity of debitage, including two cores and four core rejuvenation flakes (Table 2), are also present. For the most part the workmanship represented by the assemblage is quite crude, but core preparation or blunting, a characteristic which is typical of flint of the Mesolithic/Early Neolithic period, is evident throughout (Table 2). Tools suitable for woodland clearance and/or large scale woodworking such as might be required for the construction of permanent structures are not present.

From such a mixed assemblage, it is impossible to quantify or to draw any meaningful inferences about different episodes of occupation. Also, owing to the lack of clear stratigraphic relationships, it is impossible to be sure whether the typological range of the microliths has any chronological reality. Both the types of tools present and the proportion of microliths to other flint types, however, suggest that Mesolithic activity at Eridge was similar to that which occurred at other excavated sites within the Weald including the Hermitage, High Hurstwood (Jacobi & Tebbutt 1981), Rocks Wood, Withyham (Harding & Ostoja-Zagorski 1987) and Rocks Field, Uckfield (Hemingway 1980; 1981a). This was characterized by transitory occupation by small, mobile, hunting or hunter-gatherer groups.

CONCLUSION

MESOLITHIC OCCUPATION

This exploratory work found no evidence of the type of negative features (e.g. stake-holes or post-holes)

which would indicate permanent structures, and the tool-kit utilized non-local material (flint). These factors, when taken together with the site's topographical and geological situation, place the earliest identifiable activity at Eridge firmly within the framework of attributes established by excavations at other rock shelters in Sussex. The results of the excavations at Eridge, however, reveal a number of problems with traditional approaches to the study of such sites, particularly in relation to the interpretation of vertical distributions of flint finds (cf. Jacobi & Tebbutt 1981, 24–5; Hemingway 1981b, 33–4). The survival of closed archaeological assemblages within the upper levels would appear to be unlikely owing to the intensity of animal activity and the consequent stratigraphic displacement of material. Even so, the potential of the site — and others — for the identification of distinct typological and/or functional sets remains high. Additionally, the depth of finds in test pits A and B suggests that archaeological deposits may survive undisturbed at a lower level, below that at which animal burrowing occurs.

LATE IRON AGE/EARLY ROMAN ACTIVITY

The co-occurrence of Late Iron Age/Early Romano-British pottery and primitive iron slag on a former land surface provides circumstantial evidence for an Iron Age date for iron-working at Eridge. It is only the second such discovery within a wealden rock shelter. The first was at Rocks Wood *c.* 3 km to the south-west, where an *in situ* furnace, assigned to the 1st century AD, was excavated (Harding & Ostoja-Zagorski 1987). Neither site has produced evidence for contemporaneous occupation so far, although ploughing at Eridge Park in the 1950s threw up a quantity of Late Iron Age/Early Romano-British pottery indicative of a small settlement (Money 1979, 258). The reason for smelting in these locations, which do not readily yield usable ores, is unclear. Cleere has suggested that it relates to the shelter provided by the rocks, which was 'both in the interests of efficient smelting and for the comfort of the iron makers' (Cleere 1987, 31). An alternative suggestion is the possible temporary exhaustion of locally available wood on ore-rich geologies. The extant pour of slag at Eridge implies the former existence of a smelting furnace in the immediate vicinity of the excavation. The fact that no *in situ* trace of such a feature could be identified, together with the stray fragments of furnace lining, raises the possibility that for some unknown reason this structure was dismantled or destroyed.

FUTURE WORK

Most recent work on rock shelters — including the present study — has involved the excavation of quite small trenches, usually in the immediate area of the rocks. Clearly this has its advantages: any excavation in an environment known to have been favoured by a particular group has a better chance of picking up traces of that group than an excavation in an environment not so favoured. However, the present study has identified some problems with this approach, particularly in terms of the vertical distribution of finds. These problems would be

Table 2. The flint assemblage.

Flint type	Test pit A	Test pit B	Test pit D	Test pit E/ extension
Blade	40	47	4	23
Utilized flake	19	14	1	15
Retouched blade	2	2	none	2
Retouched flake	none	1	none	3
Broad butted flake	1	1	none	7
Microlith	none	5	none	none
Unfinished microlith	none	1	none	?1
Microburin	1	none	none	none
Burin	none	1	1	1
Core	none	2	none	3
Core rejuvenation flake	2	1	none	1
Debitage/unidentifiable	93	94	6	88
Core preparation	12	10	2	8

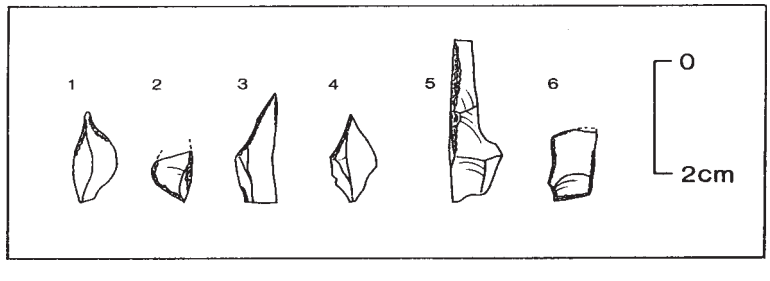

Fig. 7. Test pit B. Microliths. Flint numbers correspond to those located in Figure 3.

addressed — if not necessarily solved — by the adoption of a different excavation strategy, involving open-area excavation instead of test-pitting or trenching. Additionally, a programme of surface survey and test-pitting is needed outside the immediate area of the rocks in order to place such sites within the context of the wealden landscape as a whole.

Note. The numbers used in the text correspond to those in the archive: there is no test pit C, nor sherds numbered 2 and 4.

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